The Interspecies Newsletter

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Bear Ethics Fly Aesthetics

Arctic Heaven

Imagine your body a mountain with peaks and rivers, niches, shadows, sunny spots. You are filled with the thousands of creatures that have gone before you. You burst and scatter into a thousand intricate pieces that break and fly out like small pieces of colored patterned paper in the breeze.

– Shasha Higby

Sitting around a campfire on the MacKenzie River Delta in Arctic Canada with two artists, Daniel Dancer and Jonathan Churcher, swapping stories about animal ethics. I describe a visit to the Inuit village of Shishmaref, located on a windy sand bar in the Bering Strait of northwest Alaska. Thirty neat houses overlooking the ice-clogged strait fronted a quarter mile long road serving a single truck used by all for delivering groceries off an airplane. On the day I visited, the truck served as a leaning post for ten men who gathered to meet me.

One man responded to my question about beluga whale behavior by describing a hundred whales caught in shifting ice, sharing one small breathing hole for four months. The belugas took turns breathing, eventually developing a precise rhythm, granting each podmate just enough time to inhale. He slapped out the cadence against his thigh, describing it as "very even, like the way we do our drumming." Then he added, "We went out on the ice a lot that winter to listen to the whales breathe. They taught us how to get along with one other through rough times."

When I finish my story, Daniel asks a rhetorical question. How would human society be different if, instead of shaking hands or hugging when we meet, people breathed in synchrony for a few moments. Jonathan takes a different stance, wants to know if animal's truly possess music, or is it, instead, a human cultural artifact we overlay upon a mindless world. I answer obliquely, declaring that all art is gift-giving. It exists primarily for the audience, not the creator, and the hardest lesson every artist has to learn is to let the audience reinvent the performance, essentially giving listeners full expression to re-invent what's happening, whichever way they prefer to experience it.

Jonathan asks why biologists are so ungenerous whenever the discussion turns to the question of whether animals possess culture. Complex behavior? Certainly. But culture? That suggests ethics. Aesthetics. "It's all in the way they see the world," answers Daniel. "You and I see it differently. Their truths are objective, ours are relative. They find truth in data. We find it in metaphor."

The campfire dwindles. My two companions decide its time to explore the bush. Jonathan heads toward a vast marshy area where he hopes to photograph the moose whose enormous hoofprints we chanced upon earlier this morning. As he does every time he travels alone, he slings

his shotgun onto his shoulder, an act which predictably draws a protest from Daniel who hates guns. Daniel won't accompany Jonathan so long as he insists on carrying a weapon, so he points his feet in the opposite direction, off searching for whale bones in an ancient Inuit midden he's found just back from the shoreline of the Beaufort Sea.

Renewable Resources

I pull out the book I'm reading, *Beyond Geography* by Frederick Turner. Turner describes the start of the sixteenth century, when the leadership of Western Europe was spiritually and morally bankrupt. Drawing their strategic impetus from the horror of the Crusades and the intolerance of the Inquisition, they intentionally crafted a holocaust for the newly discovered continent. The horror began on the very first day of the conquest as documented in Columbus' initial log entry upon meeting the Arawaks on October 12, 1492:

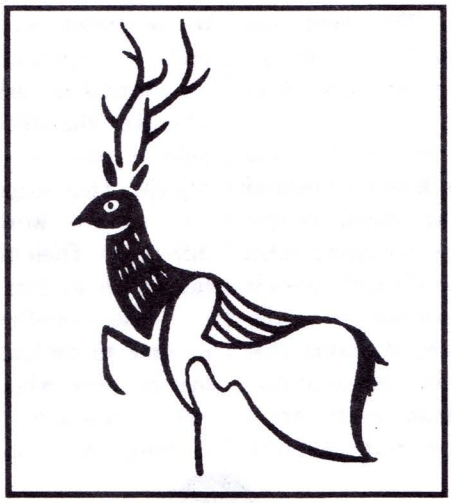
They should be good servants and very intelligent, for they soon repeat anything that is said to them, and I believe that they would easily be made Christians, for they appeared to me to have no religion.

The Europeans won the holy war, although Turner believes they never found peace within the American landscape because the tradition from which they originated was founded on a concept of nature as the Devil. Wilderness existed only to be conquered, cut, dug up, cropped, bought and sold. By comparison, the spirituality of the native cultures—the camouflaged non-religion of the long-extinct Arawaks included—was based upon a deep respect for nature. This creed, which taught native people to harmonize human community with land, permeated every aspect of aboriginal life. Turner reaches the grave conclusion that the potential merger of European intellectual prowess with Native American spiritual ecology remains the foremost lost opportunity in the history of human civilization. We live with the legacy of that tragedy today.

I spend the remainder of the sunny evening before a smoldering campfire, lusciously alone in the largest wilderness of North America, perched as it were, on the far flank of the battlefield where the Christian god's minions who rule my culture have spent the past five hundred years dueling with Satan. A circus parade of images floods my senses: Christian soldiers in metal armor shooting tattooed Arawaks, a snorting moose disemboweling Jonathan, then blown away by a shotgun blast.

The violence of the parade ruins my mood, causing me to rhapsodize a cloud of mystical grief. Actually, I don't think Turner went far enough in his damnation of the conquerors. He limited his complaint only to people. In fact, just as the conquerors annulled the spiritual contribution of native people, so they also annulled the spiritual contribution of the animals.

On the same day in 1789 when Alexander MacKenzie became the first European to view this river which bears his name, he set out to slaughter beluga whales for no reason other than it seemed good sport. The place he took to shooting so many without landing a one was fifty miles up the central channel of the MacKenzie River. No whale has been sited that far from the Sea in a hundred years.



Deer, Han Dynasty, China

Let's also add polar bears to the sad parade. Fifty years ago, the local Inuit viewed bears as mentors and gift givers whose dangerous benevolence taught boys how to become men. This initiation into adulthood was guided by prayers and supplication, asking that the bear's creative spirit might forgive them their own need to live.

How different today when Inuit are granted an "aboriginal dispensation" to continue what is a bastardized tradition. Fast snowmobiles have usurped slow dogsleds as the hunter's vehicle of choice, and biologists are noticing that the newly mechanized hunt is quickly threatening the polar bear population.

The Canadian Department of Fisheries and Oceans recently stepped in to regulate the dispensation by instituting a village voucher program, with one voucher permitting the killing of one bear. Since snowmobiles have made native hunters as dependent on the money economy as everyone else, and since the traditional need for the polar bear fur has largely been supplanted by store-bought clothing, Inuit leaders on Lancaster Sound in the Canadian High Arctic came up with the entrepreneurial idea of marketing their vouchers to foreign big game hunters who, otherwise, would not be permitted to shoot the protected bears. Business is booming, amply demonstrated by the $14,000 market value of each voucher.

Ironically, the marketeers demand that their Caucasian clients eschew snowmobiles in favor of chartered dogsleds. This is done in a theme-park attempt to demonstrate traditional Inuit ways, and includes a staging of the now-defunct bear initiation. Because all the local bears are radio-tagged, they are located, not by onerous search, but by dialing coordinates on a radio receiver.

Stringent international laws deny the export of threatened animal species like polar bears, so the clients don't

get to take the furs home. The reward resides completely in the killing, a concept vastly removed from traditional Inuit values. Apparently, the majority of clients are M.D.s from Dallas Texas.

The polar bear hides are collected by the local Renewable Resources officer. When he has ten or more of these so-called "renewable resources" in hand, he holds an auction. Because Japan is one of the few countries not abiding by the CITES agreement that regulates international trade in endangered species, the Japanese are the most avid buyers of polar bear skins. Proceeds support several renewable resource programs, including the bulk purchase of snowmoble parts to speed the modernization of the aboriginal dispensation program.

Just One Gun

I place my cheek on the ground and blow the fire to life, hang a kettle, brew a cup of hot tea and envision Jonathan in his green and black plaid jacket, swinging a machete hard to the right and then to the left as he cuts through the reeds, grunting with each stroke. He slouches from the weight of the heavy shotgun over one shoulder, and an ammunition belt over the other. With every step he takes, I imagine the gun growing heavier and heavier.

How is it that the gun is the most common instrument used by humans to relate to the wild beings of this planet? I recall a conversation with a bush pilot on the day we left Inuvik by canoe. He showed some concern that we carried only one gun between the three of us. "It's the bears you need to watch for," he explained. "Grizzlies that is. I doubt you'll see polar bears this time of year. They spend summer on the pack ice filling their bellies on seals."

The pilot paused a moment before driving home his central thesis. "If you guys make it all the way out to the bluff at the western edge of the MacKenzie Delta, pay attention to what you're doing. It's not unknown for a polar bear to appear in a camp, even in July."

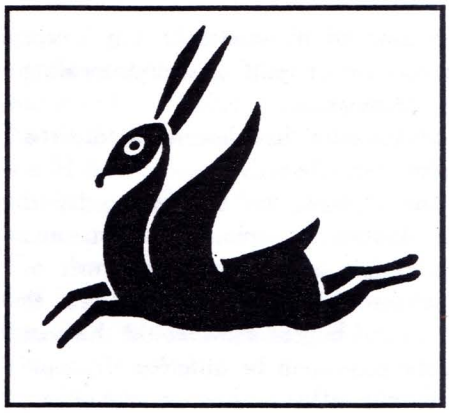
His words enter the dreamy circus of my mind like a sledge hammer smashing the target and ringing the bell. I stand up and take a hard look in every direction. Don't see anything unusual so I sit back down on the bucket. "We feel OK having one gun." I answered timidly. "I have to admit, though, part of me wishes Jonathan had left it behind."

The man stared at me as if I had just informed him that the green and brown topographical map we were studying was actually a pizza. "Oh, I guess you'll be OK with just one gun." He responded gently. "Anyway, there's not much chance of seeing a polar bear. And the grizzlies don't have much reason to snoop around a camp unless you leave food uncovered."

I meant to ask him how people keep food out of reach of bears in this country with no trees. Instead, I blurted out something moronic. "I'm not concerned about bears. They won't harm us." When he failed to respond, I asked a question. "What do local people do when they see bears?"

"Do?" he lifted an eyebrow, then chuckled. "They shoot them, that's what they do." He pursed his lips, then answered with a slice of local lore. "Grizzly bears are as smart as wolves, although they're not as smart as wolverines. Some bears know how to spring a trap to get at the bait. They all know about guns. That's why they avoid people." He smiled brightly. "So, hey, don't worry about it. You've got your gun. Keep it where bears can plainly see it." He stood, grabbed two Doctor Peppers from his refrigerator, and handed one to me. And never again mentioned bears.

A restaurant in the town of Inuvik has a mounted ten-foot tall polar bear posed on hind legs, with teeth bared and claws raised. When we ate there the night before heading out, we took turns leaving our chairs



Flying rabbit, Han Dynasty, China

to stand next the bear, just to marvel at its size. The paws were a foot-wide, the claws three inches long. When I returned to my seat, Jonathan informed me that the bear was portrayed in a defensive posture, posed as it appeared to its killer in its moment of annihilation. Daniel commented much too loudly, "Too bad they didn't stuff the hunter instead."

Jonathan lives in Inuvik. He looked about the restaurant and chided Daniel to lower his voice.

I peered around the room, noticing two young couples drinking white wine, and a party of four men in white shirts and ties, with thick briefcases strewn at their feet. We seemed the only Arctic stereotypes in this room, so I accused Jonathan of over-reacting.

"Maybe so. Maybe so." he answered in a whisper; then confessed that last fall he ate in this restaurant with two hardcore trappers. They also complained about the bear's pose being disrespectful to its spirit.

Animal Disguises

I sit on a sealed plastic bucket containing Tupperware receptacles full of peanut butter and parmesan cheese. At least once a minute I find myself unable to control an urge to lift my eyes to scan the landscape in search of Jonathan returning to camp with his shotgun in tow. Nothing moves in

this land of the midnight sun except an occasional puff of wind swaying the cottongrass.,

My mind has descended into the malaise of Turner's proposition. How would America be different today if the European explorers had treated the people and animals they met as teachers and peers rather than as slaves and targets? How would this vast Arctic eco-system be different if people had not always shot at the bears who ventured too close? Of course, those bears exhibiting any measure of curiosity toward human beings were the first to be done in. Only the stealthy, the disinterested, and the fearful survived. If there had ever been token "ambassador" bears who sought out human contact, no one will ever know about it.

Actually, the continuous killing of bears by humans dates back to the Paleolithic in this part of the world. Although the traditional Inuit conducted elaborate ceremonies to apologize to the spirit of any bear about to be slain as food, the essential relationship was always based on killing. Bears became what humans made of them: co-evolved into creatures both fearful and stealthy. Our two species live with that legacy today. An ethic based primarily on evasion seems the only thing keeping bears alive in this world. Only those humans willing to entertain the proposition that bears possess ethics will ever know that.

There is a widely held belief among native people that the animal we observe in nature is dressed in a disguise it puts on to visit our world. Once home again, the animal removes the furred or feathered costume, and shows its true form which is identical to a human's true form. In other words, traditional people conceived of animals as people. The "natural world" we moderns perceive as a resource or a collection of habitats, traditional people perceived as neighborhood.

"Honk honk honk," a flock of geese flies overhead, prying me from my reverie. Jump to my feet, listen intently to the beating of their wings, observe their long smooth glide to earth. They settle below my line of sight, and no doubt, immediately take off their costumes. If it's true, then no animal has ever been at home in a fishbowl or zoo. At a zoo, visitors stroll between the cages and gaze upon so many shell-shocked burnouts, drug addicts, and mental cases pacing back and forth all day long.

Moose High School

I stick a hand in my pocket, but come up with a crumpled newspaper story Daniel handed me on the day we departed for the Arctic. A sportsman's association in Michigan wants to stop the decline of tourism dollars caused by a general ban on eating local gamefish due to mercury contamination from a nearby chemical plant. So they spent $50,000 on a tagging program. Now, a fish caught with a metal disc in its fin is worth upwards to $10,000 and more fishermen than ever before are arriving at the lake. Nothing is said of proceeds being spent to clean up the mercury.

I open a white food bucket and build a stack of rye crackers on the lid, fill them with cashew butter and strawberry jam. Dump the stack of crackers onto the another lid. Walk to a small waterproof sack leaning against a tent to peruse the other choices in our three-book wilderness library. I grab *The Living Arctic*, by Hugh Brody, carry it back to the fire. I skim the Brody furiously to encounter a description of dream hunting, a technique developed by the Northern Athapaskans:

They camped at the place he dreamed about and one of his sons killed the fat moose he was told of in his dreams. His son came back from the hunt and they went out to get the moose...The son asked his father, "Aba, father", how did you come to dream that I would get that fat moose? You dreamed right."

I rarely recall my dreams, so I can't recall if Jonathan's moose told me its whereabouts last night as I slept. No doubt, I would have fared better if Columbus had honored the Arawaks with the result that today, American high schools might follow an Athapaskan rather than a European curriculum. We would spend more class time learning to communicate with moose through dreams, and less time dissecting frogs and sentences.

I scan the bluff. Far to the East, stands Daniel reduced to a single monochrome pixel set against the tundra. Forty five degrees to the south, my eyes alight on two sandhill cranes stalking each other through the reeds like skinny elves in heat. Another twist counterclockwise, now peering due south, my eyes strain to capture two round and brown bouncing balls set upon the songline of the near horizon. They are definitely four-leggeds. I squint my eyes to bring the objects into better focus. Grizzly Bears! They have to be! The weight of temporary insanity brought on by the vapors of cruel history lifts from my shoulders.

Right/Left Brains

I squint ferociously and start playing with the angle set between my eyeglasses and my pupils, trying, just this once, to get my weak eyes to galvanize a sharp image out there on the tundra. I have already read our third book, Aldous Huxley's *The Art of Seeing*. Obeying Huxley, I flash my eyes, meaning I glance quickly at the place where the brown balls bounce, then close my eyes to reconstruct the image that fell on the screen of my retinas. As Huxley explains it, when one stops trying to see, seeing comes. Feeling ready for any revelation, I try it several times. But it doesn't work.

I hunt around camp for the binoculars that should be nearby. I am no more capable of seeing them, than the bears. Jonathan, must have taken one pair. And Daniel took the other. Daniel also took his camera

with the telescopic lens. I stare with alarm at all the loose crackers, jam jars, and nut butter containers. The presence of two grizzly bears frolicking like Magellenic Clouds around the Milky Way of our camp kitchen necessitates a certain measure of care.

Something kicks in. My rational mind, general manager of the shaky edifice of my psyche announces his timely return after a notable absence. He commands me to settle down. Take a deep breath. Find a higher vantage point. I comply by standing on a white bucket, cup my right hand over my eyes, lean forward and gaze outward like a statue of some resolute explorer. The bears react by staring fully at my seven foot-tall being with a white pail-shaped foot. They run for cover behind some bushes, then reappear a moment later. Without another look in my direction, they start churning up the dirt to extricate whatever nutrition lies beneath.

Any bear existing in the Arctic has to eat all day long. Eat and eat and eat, then one day wander off to dig a burrow, she places herself inside, covers the opening as best she can, gets good and comfortable, then falls into a snooze for six months.

The surreal image of a stuffed big game hunter decorating the she-bear's den, motivates the illogical right side of my brain to attempt a coup d'etat against the left side's general manager; prodding me with the lunatic urge to strip off my clothes, run across the meadow with arms outstretched to hug these two emissaries of wildness. As a child, I read fondly Johnny Appleseed's frolicking with a bear family. As every schoolchild learns, Johnny Appleseed—one of the few genuine American saints—was a real person. If Johnny could do it, why can't I? His good deed is my good deed.

Fortunately, the general manager is not impressed by my latest flight of fancy. He moves me to act, throws a stack of wet driftwood onto the embers. Get it going good and smoky *then watch the black smoke waft across* the prairie directly at the bears. I jog to the top of the bluff. When my separation from the camp kitchen seems adequate, I turn towards the meadow to plot the bear's status. I stare and stare, flash and flash. But they are gone.

Scat Symphony

Daniel returns to camp two hours later doubled over from some gastro-intestinal fiend. Jonathan arrives ten minutes later without a single photograph to his credit. Both smile demurely as I relate my bear story. Not surprisingly, neither man seems convinced that I actually saw what I think I saw. Jonathan wants to know how I can be so sure it wasn't a caribou. Daniel suggests it was the shadow of a cloud rolling across a bush to give it a sense of motion.

Nothing to do but tromp across the meadow in search of grizzly evidence. 200 yards from camp, Jonathan uncovers the proof we seek. Steaming on a small hummock of cottongrass, lies proof that a bear relieved itself. I am validated, and so happy I could kiss it. We drop down around it like three Robinson Crusoes discovering a footprint.

"Was it Aesop who first asked if bears shit in the woods?"

"Actually, the premise is false. Bears hold the world record for not shitting in the woods. They don't shit at all during the many months they hibernate."

Picture it if you can. The three of us are stooped on one knee around a steaming lump of bear feces lying on the peat prairie at the northwestern edge of the MacKenzie Delta in Canada's Northwest Territory. Daniel pokes the excrement with a stick. Shiny green flies rise from the mass with every poke, then quickly settle back on their feast.

To an outside observer, it would appear as if Daniel is conducting some *kind of scientific research, perhaps* attempting to determine if those shiny purple dots staining the feces are undigested huckleberry seeds. In fact, Daniel doesn't care a whit about the bear's diet. He's a talented artist, but no biologist. The stick is his baton and he is conducting a musical symphony. The three of us are beguiled by the deft manner in which the stick prompts the flies to alter pitch and rhythm with every poke.

Do flies have a sense of aesthetics? Evidently they do, because we have become their rapt audience. Jonathan and I lay our faces to the ground and close our eyes to pick out subtle variations in pitch. One of the flies is too stuffed to rise. It whines like a singing shepherd from Tuva, appending deeper overtones to its fundamental buzz. Two more flies rise as Daniel pokes again, creating harmonies reminiscent of the Bulgarian woman's chorus. One voice hangs above the choir performing a Tamboura drone.

The tamboura player flies up and bumps hard against my mosquito hood, falls to the ground injured, although it's bent wing continues to beat wildly and randomly, not unlike an oboe solo from a John Cage sonata.

The moment passes, the three minute symphony ends with the three of us sighing collectively. We stand to examine each other's face through our mosquito hoods. We are wind-burned and haggard, but our eyes are formidably clear. The muscles in our faces are so altered after three weeks wandering this Arctic realm that I wonder if we would be recognizable to those back home who love us. We have turned impossibly slow to react to any stimulus in this riverine world. "this trip is getting better all the time," whispers Jonathan. He turns and walks toward the kitchen. Brews tea. We drink it. Then pack and head out to sea in our canoe, searching for beluga whales.

—Jim Nollman

This is an excerpt from a new book in progress, entitled The Wild Heart, *about making art in nature. No publisher yet.*

Is Music Noise?

Interspecies Inc was filmed by the CBS news show 60 Minutes last summer, while conducting communication research off northern Vancouver Island with orcas. The show will air sometime this winter, and we're glad to send an email to any member who wants to be notified when we have an air date. Send your request to: beluga@interspecies.com

When the shooting was done, we were surprised to hear a complaint against our transmitting procedures levied by a local whale film maker He basically charged that the sound we refer to as music, is actually noise pollution to a whale. This accusation seemed woefully misplaced, given the fact that we broadcast live sounds at a volume less than a small outboard motor. Moreover, we conduct our research anchored in one special location off the whale's path, so if they are indeed interested in what we transmit, then they have to come to us. During the *60 Minutes* shoot, the orcas came to our boat of their own volition, a behavior that was definitely caught on film.

Nonetheless, the accusation was public enough that it seemed important to defend our long term communication study, not only with the orcas, but also our general research which takes us around the world to plumb the depths of whale communication. IC director Jim Nollman answered the complaint in November 2000 at a symposium about oceanic noise pollution, hosted by the American Cetacean Society in Seattle.

That Nollman quietly transmitted guitar for 45 minutes in an area where a fleet of whalewatching boats actively pursues the whales all day long, all summer long, made the criticism seem a bit shrill. Ironically, our accusor is a professional film maker who often relies on a motorboat to get his orca close ups.

We believe the criticism against us was not about putting <u>any</u> sound into the water, but <u>intentional</u> sound which promotes a relationship with whales based on aesthetics. Aesthetics are subjective by definition, and therefore it is a subject that eludes scientific analysis. Any research seeking such a relationship with an animal plays with ideas about non-human sentience, intellect, and creativity. Over the years, our non-objectivist focus occasionally results in censure from a few old school biologists who complain that no one but marine biologists deserve close access to the whales. The film maker's criticism was of this same ilk. If the declared exclusivity seems heavy-handed, then realize that a recent a capella music concert on San Juan Island Washington, advertised "for the orcas" took more explanation to the Marine Mammal Commission than a biologist's application to shoot darts into the hide of the same orcas. I have been known to respond to the criticism that our research is not replicable by quoting Miles Davis who defined jazz as "never playing the same note twice."

Can whales discriminate between outboard motor noise and music? I believe our working method of letting the orcas decide for themselves is the only way to settle the issue. Everyone knows that orcas possess a brain larger than a humans, and that they exhibit many signs of advanced culture. Since they sing to one another using frequency modulated whistles—in other words using melody—then why can't the critics allow for the fact that they may respond to human music.

Choirmaster Fred West, may have said it best in the New York Times report about the a capella concert, "Mostly what the whales get from us is a lot of motor noise. That's certainly not the best human beings have to offer. If we could just get off our dominion-over-the-earth thing for a while, put aside the idea that we're top of the heap, then maybe we could really learn something from other species."

Wish List

IC pleads for help to purchase a powerbook laptop computer. First, it has become an essential component of next summer's Russian beluga project. We can't edit and analyze audio on the White Sea without it. Second, IC has developed a multimedia presentation that superbly explains our work to the general public. But we can't take the show on the road until we get our own Powerbook to run it. When we do get it, we'll set up dates all over Europe and North America. This presentation offers real potential to earn money for IC, so we don't have to rely on outside funding for everything we do. At current costs, a Mac laptop with extra memory and an audio card costs about $3000.

Book Reviews

Whale Tales II

Collected by Peter Fromm, Whale tales Press, Friday Harbor WA, (800)669-3950

I sometimes see Peter at crafts fairs, selling his artful book the way other people sell pottery. He's always been an inspiration to me, not only for collecting stories about people and whales, but for editing, designing, publishing, and marketing the book series on his own. *Whale Tales* read like a series of folk tales from some oral tradition overheard at a campfire. This volume two illuminates humans and whales doing their best to simply greet one another well, a testament sadly lacking from most mainstream nature writing. The book makes a great gift.

...It is night. The sky has cleared, the wind is westerly again. The moon, in her first quarter, seems to hang

behind the mizzen, making the sea glisten in the wake. The reef is cleared, my porpoises are gone, the way is free until the Horn. Free on the right, free on the left, free everywhere.

—Bernard Moitessier

...When the killer whales were entering the inlet, I went into the water. I was sitting there and began making sounds, splashing and blowing bubbles with my face in the water. Two females came in close, logging at the surface two meters away. After that encounter, the whales came to find me in the same place several times. I got deeper in the water and they swam closer, almost touching me. When I played my harmonica for them, they rolled over each other to get closer to me.

—Roberto Bubas

...Perhaps whales are only celebrities, Elvis Presleys of the animal realm. In other words maybe we give them more power than they deserve. Or maybe they actually have the power we feel from them. Look only to yourself for the answer. Go find a whale and decide if the power is real. And realize that the once distinct lines between scientists, environmentalists and mystics now seem to be softening.

—Jim Nollman

A Whale Hunt

By Robert Sullivan, Scribner, 2000

As someone who visited Neah Bay to meet with Makah tribal leaders, I conclude that this literate book serves up an uneven account of the Makah whale hunt. During his two year stay in Neah Bay, the personable Sullivan makes friends with several locals, and goes into great detail about the crew training in their canoe, followed by anti-whaling protestors and the Media arriving in force. Unfortunately, he was never privy to the decision-making process of tribal leaders who never emerge from the edges of his vision. Worse still, he portrays many of the protestors as shrill racists, and, never even mentions for instance, Cynthia Matzke who spent several months working alone trying to convince the wavering tribal majority that they didn't need to kill a whale to re-vitalize their traditions.

The result is a book that leaves gaping holes in a complex political and environmental incident. For instance, when representatives of several nation's whaling industries convene in Neah Bay, ostensibly to welcome the Makah into their brotherhood of whaling, we get to drive in the car with Japanese whaling executives, but Sullivan never tells us why this group was invited to Neah Bay in the first place, and what they plan to offer the tribe. He offers the lame excuse that none of his Makah friends seem to know either, without recognizing that their obfuscation becomes his own. When protestors later accuse the Makah of accepting a bribe from the Japanese to cultivate whaling on the American west coast, Sullivan never makes the connection. Such lapses in reportage occur so often that anyone who cares about animals is left dissatisfied by a book displaying much style and not enough truth-telling. Let's hope someone else eventually offers a better accounting of a controversial event.

The Universe Below

By William J. Broad, Simon and Schuster, 1997

The book offers a thorough overview of what is truly the last frontier on Earth—the depths of the sea. It is written by a New York Times reporter who, essentially, lets us accompany him on his own journey of discovery to such places as the Azores where a sunken armada awaits salvage, to the Titanic, to undersea vents spewing a treasure of precious metals as well as organisms capable of withstanding superheated water. Along the way, we learn about the horrific deep sea dumping of radioactive waste by the Soviet Navy, the US Government's low frequency "ATOC" tests conceived to shed light on global warming but vigorously protested by the whale lobby, and strange and wondrous microbes that inhabit the rocks far beneath the earth's surface and which are emerging as a cornerstone of biotech research. I couldn't put this book down although, I was often annoyed by this author who criticizes the obvious pattern of technology fostering greed, but then gloats over the same new technology whenever he gets to see it in action. Like any mainstream science writer, he seems unwilling to elucidate the true price (or even the meaning) of endless information accrued for its own sake. Then again, I admit to a thin skin whenever data gathered in the cause of nothing but science is presented as if it were knowledge.

...It was improbably long and thin, with a fiery red dorsal fin that ran the length of its body and exploded into a feathery crest atop its head. Today the creature goes by the rather pedestrian name of *oarfish*. The eerie, serpentine beast can grow to lengths of 55 feet and weigh more than 600 pounds. It is believed to live at depths of up to 100 fathoms (600 feet).

...The Navy undersea microphones that were to record the temperature signals were located up and down the west coast, off Alaska, around Hawaii, and in Guam...They would rumble with low frequency noises for twenty minutes, repeating that signal up to six times a day. In theory, the monitoring of the undersea rumble would open the concluding chapter of the global warming debate, settling it once and for all. That was the plan. But ATOC and its scientists ran into the whale lobby, a political force to reckon with in the late 20th century, especially in nature-loving California.